

SEQUENCE LISTING

SEQ ID NO: 1 - hCARa sequence ACCESSION CAA83016

1 MASREDELRN CVVCGDQATG YHFNALTCEG CKGFFRRTVS KSIGPTCPFA
GSCEVSKTQR

5 61 RHCPACRLQK CLDAGMRKDM ILSAEALALR RAKQAQRRRAQ QTPVQLSKEQ
EELIRTLLGA

121 HTRHMGTMFE QFVQFRPPAH LFIHHQPLPT LAPVLPLVTH FADINTFMVL
QVIKFTKDLP

181 VFRSLPIEDQ ISLLKGAAVE ICHIVLNTTF CLQTQNFLCG PLRYTIEDGA

10 RVGFQVEFLE

241 LLFHFHGTLR KLQLQEPEYV LLAAMALFSP DRPGVTQRDE IDQLQEEMAL
TLQSYIKGQQ

301 RRPRDRFLYA KLLGLLAELR SINEAYGYQI QHIQGLSAMM PLLQEICS

15 SEQ ID NO: 2 - mCAR β 1, mCAR1, ACCESSION AAC53349

1 MTAMLTLETM ASEEYGPRN CVVCGDRATG YHFHALTCEG CKGFFRRTVS
KTIGPICPFA

61 GRCEVSKAQR RHCPACRLQK CLNVGMRKDM ILSAEALALR RARQAQRRAE
KASLQLNQQQ

20 121 KELVQILLGA HTRHVGPLFD QFVQFKPPAY LFMHHRPFQP RGPVLPLLTH
FADINTFMVQ

181 QIIKFTKDLP LFRSLTMEDQ ISLLKGAAVE ILHISLNTTF CLQTENFFCG
PLCYKMEDAV

241 HAGFQYEFLE SILHFHKNLK GLHLQEPEYV LMAATALFSP DRPGVTQREE

25 IDQLQEEMAL

301 ILNNHIMEQQ SRLQSRFLYA KLMGLLADLR SINNAYSSEL QRLEELSAMT
PLLGEICS

SEQ ID NO: 3 mCAR β 2 mCAR2, ACCESSION AAC53350

30 1 MTAMLTLETM ASEEYGPRN CVVCGDRATG YHFHALTCEG CKGFFRRTVS
KTIGPICPFA

61 GRCEVSKAQR RHCPACRLQK CLNVGMRKDM ILSAEALALR RARQAQRRAE
KASLQLNQQQ

121 KELVQILLGA HTRHVGPLFD QFVQFKPPAY LFMHHRPFQP RGPVLPLLTH
FADINTFMVQ

181 QIIKFTKDLP LFRSLTMEDQ ISLLKGAAVE ILHISLNTTF CLQTENFFCG
PLCYKMEDAV

5 241 HAGFQYEFLE SILHFHKNLK GLHLQEPEYV LMAATALFSP GFCMQS

SEQ ID NO: 4 –murine CAR β genomic nucleotide sequence – Section A

AAAATTTACCCAACATAGATTTATCTAATGTAATTCCTATCTGCAGAACATCCAA
ATACTTTGGAAATTATTTNTTGTGGTTGTAGCTGTTTGAATGTAAACATATATTCA
10 AAAAAACTCTTCATGGTGATGTAGCATTGGGCAAGCTATGAGGATACCTACTTCT
GGTTATTTACTAAAAGTTGATAGCCAGGCAGTGGTGGCACACACCTTTAATCCCA
GCACTTGGGAGGCAGAGGCAGGTGGAATTATGAGTTTGAGGCCAGCCTGGTCTA
CAGAGTGGGTTC AAGGTCAGCCAGGGCTACACAGAGAAACCCTGTCTCAAAAAG
AAGGAGGAGGAGGAGGAAAGAGGAAGAGGAGGAAGAAGATCTTTTGTTTTGAG
15 ATAGCATACAGTGAAAATTTCCGGTTTCTTTAGCAACTCAGTTGTGTGCACATGATG
TCTTTCTGGAAGCTGTCTTGTGAGCAGACATGTGATGTTTATCACAATAGAAAGC

SEQ ID NO: 5 – murine CAR β genomic nucleotide sequence – Section B

AAAGAGGTCATCAGGCTTGGCAGCAAGTGCCTTTGCCTACCGAGTCTTTACACCA
20 GCTCCACCGTGGTTTTTTGAGACAGTCTCCCACTGGACTGGATTT CAGCAAGAAAG
CTAGGCTTGCCTTCTTGTCTCTGCCTCCTTGGCATTGGAATTATGAGTTGTTCCAC
CGTGCCATTTTTTAAAAATGTAGGTTCTAGGAATTAACTCGGCTCTCGGTGCTTA
TATAGTGAGTACTTTACAGAGGGAGTCACCTTGCCAGCACCTAGAATTCACTTTT
ATTCATATCCCAGTCTCCCCACGTAAGAAAGTGGGATCCCTTCTAGTGTTACACC
25 TAAGTTCTTAGTTGGATAACGAAGTCTTTTTTTTTTAACAGATCTCTGGGGCTCAGAA
GGCAAGAGCTCCTTGCAGAGGATTTAACCTCAATTCCTAGTACTCAACTTGCCAG
CTCATAACTGCCTATAACTCTAGTCCCAGAAGATCAGACATTGTCCTCTGATCTCT
GTGGGTACTAGGTATATACATTTAAAAAAAATCAATAAAAAAATTTAAAAAAAGA
AAAGAAAAAGAAAGAAAGAAAATCCTTTGGGAGCCTGGTATAATTGTTATAGCT
30 ACCTTTTTTTTTTTTTTTTTTTTTTTTTTTTACCATTTGCAAACTGCACGTGAAAAAG
CTTGCCATCTCTCCCATTTGTTTCCTGGCTTATTCAGGATCCATGCAAAAAGGGGA
GTGTAGATTTAGCCTAAAGCTCACCCACAGGGAAATCCTCCAGGAGTCTAGTAA
GCAGCAGCTTTTAATGAGTCATGAGGTCCTGGCCCCCTCCCCATCTGCCACCAACC
AACACTTCTCGGGCATGCTAGGAACCCCCACCCCACCCCACACCCACACCCAGGT

CTTTGCCCTGGGTCCAGAGTCTGGGTCCTACCTACATATGGCACCGAGGATACCT
 AGAGGCCCCATGCAAGAGAAGGCCCTTGTTTTCCAGGCACTAAGGACCGCAGTC
 CCTAATTCCTGGCAGTTCCTGAGATCTCAAGGAAAGCAGGGTCAGCGAGGAGGC
 CTGGGGAGAGGAGGCATCCTACACCCGATCTTGTGGCCTGCTGCCTAAGGGAAA
 5 CAGGTAGGTAATCCGTTGGAGGCCAGAGACAAAAAGCAACATTTTTGCTTTTAAT
 GTCCTCAGTGCTGGGGAGCCCGGTGTCAGGCTGGGCAGTCTTGGGAAGAGATTCT
 GTAGAGGAGAGAGAAGAGAGTCCATGGCCCAGTGCTGATTCTCAACTCCTCCC
 ACATTCAGGAGACCATGACAGCTATGCTAACACTAGAAACCATGGCCAGTGAAG
 AAGAATATGGGCCGAGGAAGTGTGTGGTGTGTGGAGACCGGGGCCACAGGCTATC
 10 ATTTCCACGCCCTGACTTGTGAGGGCTGCAAGGGCTTCTTCAGGTGAATGCTTCC
 TCCCCAACAGAAACAACCCCGACATTTCTATCAGTCCACCTTTAAACACTGGTAC
 ACCTCCAAGTTATAATCCTCTTGCAGCTAAGCTGCACTGCCCAGTGTCTAGCACT
 CTCAATCTTGCTGACCACAACGCAGTGTGAAACTGGTGACCTAATGACAAGGCA
 GGTAAACCATTTGTCCCAGAGACAGAGCCTAAGAGTCAAGAACACTTGTGTAGC
 15 ACACACTACCTGCAAAGCACCGAGATGATTGCCACACGAGGGTTCCTGAGTAAC
 CTTGTGTTCTCATGAAAACGCTCCAACCTCTGAAGACCTTTGAGCACAGCTC
 AGATGAGTCTGTTGTAAATCGATCC

SEQ ID NO: 6-- murine CAR β genomic nucleotide sequence – Section C

20 TGCATTGCTTTCTACTGAAGTGTATCACAGATGAATATGAGATCGACAGAAAGTG
 TGCAGGGATCCCCCTGCCATCTGGAAACACTTAATTCAATGAAGTCCCAAGGAA
 GCCTCAGAAACTCTTTCTTCCTTCCTTCCTTATCTGGGGAGGTGGAGTGGCCC
 CAACTGAAGGGATGGCTGAAAGGTGCTCGCTGCTGTTCTCAACAGCTTTGTCATC
 TCTCTTGCTGACACAGTGATACTGTCAGCAGAAGCCCTGGCATTGCGGCGAGCC
 25 AGACAGGCACAGCGGCGGGCAGAGAAAGCATCTTTGCAACTGAATCAGCAGCAG
 AAAGAACTGGTCCAGATCCTCCTCGGGGCCCCAACTCGCCATGTGGGCCCCATGT
 TTGACCAGTTTGTGCAGTTCAAGGTGAGAACTTAACCAGGATGTGACCTGGGTAC
 CTGAGGAGGTAACCCACAGAAGAAGGCTATGCCCTGATGGAGGACA

30 SEQ ID NO: 7- Sensor peptide sequence
 ILRKLLQE

SEQ ID NO: 8- Hamster CAR nucleotide sequence

CTTGTTTTCTAGGGACCAAGGACAATCCCTAATTCCTGCAGTTCCTGAGACCACA
 AGGAAAGCAGGGTCATCGTGGAGGCTTGGAGACAGGCATCTCATACCAGATTTT
 GTGACCTGCGTGTGTCATACTGCCTAAGAGAAACAGGAGACCATGACAGCTACG
 CTAACACTCGAAACCAAGGCCAGTGGAGAGGAATATGGACCGAGGAACTGTGTG
 5 GTGTGTGGAGACCGAGCCACGGGCTACCATTTCCATGCCCTGACTTGTGAGGGCT
 GCAAAGGCTTCTTCAGACGAACTGTCAGCAAAACCATTAGTCCCATCTGTCCATT
 TTCTGGAAGCTGTGAGATCAGCAGAGCCCAGAGACGCCACTGCCCAGCCTGCAG
 GTTGCAGAAGTGCCTAAACGCTGGCATGAGGAAAGACATGATACTGTCAGCAGA
 AGCCCTGTCGTTGCGGCGAGCCAGGCAGGCACAGCGGCGGGCACAAAAAGCTTC
 10 CGTGCAGATGACTCAGGAGCGGAAGGAGCTGGTCCAGACCCTCATAGGGGCCCCA
 CACCCGCCACATGGGCCCCATGTTTGACCAGTTTGTGAAGCTCAGGCCTCCAGCT
 TACCTGTTACCCATCACCGGCCCTCCTCCCCGCTGGTCCCCCCCCGCGTTACCACT
 GCTCACACACTTTGCAGATGTCAACACTTTTCATGGTGCAGCAGATTATCAAGTTC
 ACCAAGGAACTGCCCCCTTTTCGGTCCCTACCCGTGGAGGACCAGATCTCCCTTC
 15 TCAAGGGAGCAGCTGTGGAAATATTGCATATCTCACTCAACACTACTTTCTGTCT
 TCAAACACAGAATTTCTTCTGTGGGCCACTTTGCTACAAAATGGAAGACGCAGCC
 CACGCAGGGTTCCGGTACGAATATGTGGAGTTGATCTTTCGCTTCCATGGGACAC
 TGAAGCGACTGCAGCTCCAAGAGCCTGAGTATGTGCTCATGACTGCCATGGCCCT
 CTTCTCTCCTGACAGGCCTGGAATCACCCAGAGAGAAGAGATTGACCAGCTGCA
 20 AGAGGAGATGGCACTGATTTTGAACAACTACATTATGGAACAGCAGCCAAGGCC
 CCAGAGTCGGTTTCTGTACGCAAAGCTGATGGGCCTGCTGGCTGAGCTCCGGAGC
 ATAAACAATGCATACTCATATGAAATACGGCGCATCCAGGGACTGTCCGCTATG
 ATGCCACTACTTGGGGAAATCTGCAGCTGAGGCTCAGGCTTGCCTCCTTCCCCAG
 GGCCCCTGGGATTCAATTGGAAGGGGAAATTGCTGAGCTAAAAGGAGCT
 25 CAGTGACAGCAAAAAACACTGGACAGTNGGAAAAAANNNNNNNNNNNNAAA
 AGCGACCTGCCC GGCGGCCGTTTCAGC

SEQ ID NO: 9- Predicted amino acid sequence of hamster CAR

30 MTATLTLETKASGEEYGPRNCVVCGDRATGYHFHALTCEGCKGFFRRTVSKTISPICP
 FSGSCEISRAQRRHCPACRLQKCLNAGMRKDMILSAEALSLRRARQAQRRRAQKASV
 QMTQERKELVQTLIGAHRHMGPMFDQFVKLRPPAYLFTHHRPSSPLVPPALPLLTH
 FADVNTFMVQQIIKFTKELPLFRSLPVEDQISLLKGAAVEILHISLNTTFCLQTQNFFCG
 PLCYKMEDAAHAGFRYEYVELIFRFHGTCLKRLQLQEPEYVLMTAMALFSPDRPGITQ

REEIDQLQEEMALILNNYIMEQQPRPQSRFLYAKLMGLLAELRSINNAYSYEIRRIQG
LSAMMPLLGEICS

SEQ ID NO: 10 - Oligo 2930

5 CCATAAACGTGTTGATATCTGCAAAGTGTGCGAGCAGAGGCAACACGGGGCCCC
GAGG

SEQ ID NO: 11 - Oligo 2931

CTCTACAGCCTCCAGCCTATCTGTTCATGCATCACCGGCCTTTCCAGCCTCGGGGC
10 CC